

**New 4-pyrazolyl quinoline derivatives, have plant fungicidal activity****Patent Assignee:** AVENTIS CROPSCIENCE SA**Inventors:** EMERIC G; HARTMANN B; HUSER N; LACHAISE H; LE HIR DE FALLOIS L; GARY S; GERUSZ V; GOURLAOUEN N; PEREZ J; WEGMANN T**Patent Family**

Patent Number	Kind	Date	Application Number	Kind	Date	Week	Type
FR 2795726	A1	20010105	FR 998596	A	19990630	200119	B
WO 200102385	A1	20010111	WO 2000FR1816	A	20000629	200119	
AU 200062884	A	20010122	AU 200062884	A	20000629	200125	

**Priority Applications (Number Kind Date):** FR 998596 A ( 19990630 )**Patent Details**

Patent	Kind	Language	Page	Main IPC	Filing Notes
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**Abstract:**

FR 2795726 A1

**NOVELTY** Pyrazoles (I), their geometric and optical isomers and tautomeric forms, their salts, N-oxides, and complexes with metals and metalloids, their preparation, and fungicidal compositions containing them, are new.

**DETAILED DESCRIPTION** Pyrazoles of formula (I), their geometric and optical isomers and tautomeric forms, their salts, N-oxides, and complexes with metals and metalloids, their preparation, and fungicidal compositions containing them are new.

R1, R2=alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkoxy sulfonyl, alkenyl, alkynyl, alkenyloxy, alkynyoxy, alkenylthio, alkynylthio, cycloalkyl, heterocyclcyl, cycloalkylalkyl, heterocyclcylalkyl, alkyl carbonyl, alkenyl carbonyl, alkynyl carbonyl, alkyl carbonyloxy, alkenyl carbonyloxy, alkynyl carbonyloxy, alkoxy carbonyl, alkenyloxy carbonyl, alkynyoxy carbonyl, cycloalkyl carbonyl, heterocyclcyl carbonyl, cycloalkyloxy carbonyl, cycloalkylalkyloxy carbonyl, heterocyclcyl carbonyl, heterocyclcylalkoxy carbonyl, thioalkylthio carbonyl, alkoxythio carbonyl, aryl, heteroaryl, aryl carbonyl, heteroaryl carbonyl, OH, SH, COOH, NO<sub>2</sub>, CN, CNS, N3, NR<sub>4</sub>R<sub>5</sub>, -CONR<sub>4</sub>R<sub>5</sub>, -CSNR<sub>4</sub>R<sub>5</sub>, or C(=NR<sub>4</sub>)R<sub>5</sub>, or taken together they form a 5-7 membered ring containing 2-3 O or N atoms which may be substituted by one or more halogen, alkyl, or haloalkyl groups;

R3=H, alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkoxy sulfonyl, alkenyl, alkynyl, alkenyloxy, alkynyoxy, alkenylthio, alkynylthio, cycloalkyl, heterocycl, cycloalkyl carbonyl, heterocycl carbonyl, cycloalkylalkyl, heterocyclalkyl, alkyl carbonyl, alkenyl carbonyl, alkynyl carbonyl, alkyl carbonyloxy, alkenyl carbonyloxy, alkynyl carbonyloxy, alkoxy carbonyl, alkenyloxy carbonyl, alkynyoxy carbonyl, alkoxy carbonyl, alkenyloxy carbonyl, alkynyoxy carbonyl, cycloalkyloxy carbonyl, cycloalkylalkyloxy carbonyl, heterocyclxy carbonyl, heterocyclalkoxy carbonyl, aryl, heteroaryl, aryl carbonyl, heteroaryl carbonyl, OH, SH, COOH, NO<sub>2</sub>, CN, CNS, N<sub>3</sub>, NR<sub>4</sub>R<sub>5</sub>, -CONR<sub>4</sub>R<sub>5</sub>, -CSNR<sub>4</sub>R<sub>5</sub>, or C(=NR<sub>4</sub>)R<sub>5</sub>;

R4 and R5=H, alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkoxy sulfonyl, alkenyl, alkynyl, alkenyloxy, alkynyoxy, alkenylthio, alkynylthio, cyano alkyl, alkoxy alkyl, alkoxy carbonyl alkyl, cycloalkyl, heterocycl, cycloalkyl alkyl, heterocycl alkyl, alkyl carbonyl, alkenyl carbonyl, alkynyl carbonyl, cycloalkoxy carbonyl, cycloalkyl alkoxy carbonyl, heterocyclxy carbonyl, aryl, heteroaryl, arylcarbonyl, heteroaryl carbonyl, arylalkyl, heteroaryl alkyl, SH, COOH, NO<sub>2</sub>, CN, CNS, N<sub>3</sub>, OR<sub>6</sub>, NH<sub>2</sub>, alkyl and dialkyl amino, amino alkyl, alkyl amino alkyl, or dialkyl amino alkyl;

R6=H, alkyl, aryl, heteroaryl, arylalkyl, heteroaryl alkyl, cycloalkyl, cycloalkyl alkyl, heterocycl, heterocycl alkyl, or alkoxy carbonyl alkyl;

Y1-Y6=H, halogen, OH, SH, NO<sub>2</sub>, CNS, N<sub>3</sub>, CN, pentafluorosulfonyl, alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio, haloalkylthio, alkoxyalkyl, haloalkoxy alkyl, alkyl thioalkyl, haloalkyl thioalkyl, cyanoalkyl, cyanoalkoxy, cyanoalkylthio, alkylsulfinyl, haloalkyl sulfanyl, alkyl sulfonyl, haloalkyl sulfonyl, alkoxy sulfonyl, cycloalkyl, halocycloalkyl, alkenyl, alkynyl, alkenyloxy, alkynyoxy, alkenylthio, alkynylthio, aryl or heteroaryl optionally substituted, amino, alkylamino, dialkylamino, acylamino, aminoalkyl, N-alkyl aminoalkyl, N,N-dialkyl aminoalkyl, acylamino alkyl, COOH, CONH<sub>2</sub>, N-alkyl- or N, N-dialkyl carbamoyl, alkoxy carbonyl or alkylcarbonyl, or two adjacent groups Y1-Y6 form a 6-membered aromatic ring or a methylenedioxy group

all of these groups being optionally substituted by a group as defined below.

INDEPENDENT CLAIMS are also included for preparations of (I).

ACTIVITY Fungicide.

In tests against *Septoria nodorum* on wheat, plants were treated with an aqueous suspension of the compound then, after 24 hours, infested with the spores and left for 72 hours at 18degreesC in a humid atmosphere. The effect was noted after 15-20 days, and showed that an application rate of 500 g/ha gave at least 50% protection, and gave total protection in some cases.

MECHANISM OF ACTION None given.

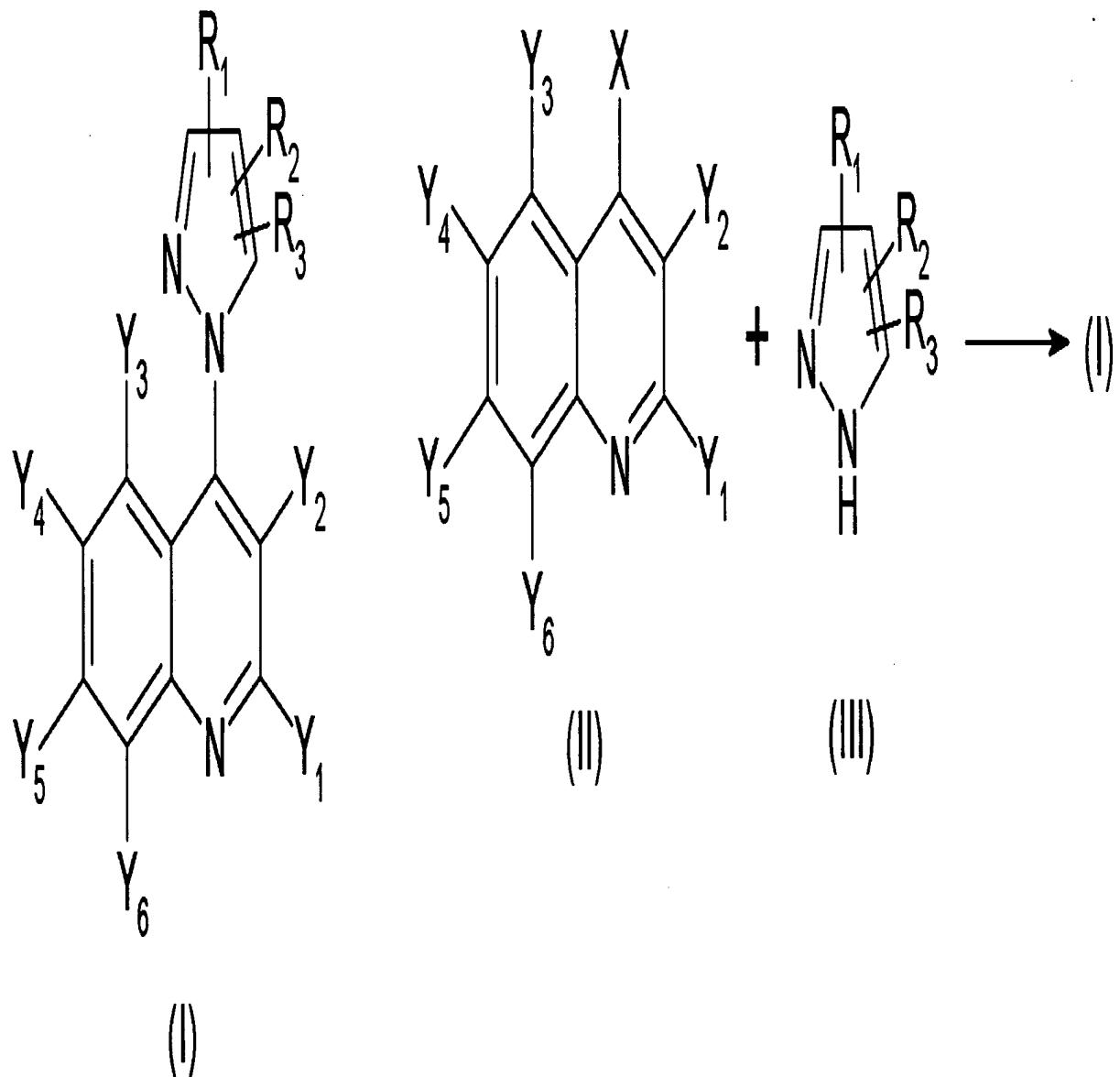
USE Plant fungicides, especially useful in the treatment of cereals, fruit trees, maize, cotton, flax, rapeseed, vines, forest trees, peas, potatoes, and beet, including genetically modified plants.

pp; 175 DwgNo 0/0

**Technology Focus:**

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - The compounds may be prepared by e.g. reaction of a quinoline (II) with a pyrazole (III) in the presence of a base.

X=halogen.



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